

Transportation Compliance Evaluation/Assistance Program

3. Hazardous and Radioactive Materials Shipper

Revision 1, July 2000

Standard: Shipping of all classes and divisions of hazardous materials (including radioactive) and waste shipments are conducted in a consistent and accountable manner, following approved procedures, in compliance with requirements of applicable international, federal, state, tribal and local laws, rules, and regulations and DOE Orders and policy.

References: 40 CFR 262 and 263, 49 CFR 107, 172, 173, 174, 175, 176, 177, and 178, DOE Orders, Implementation Guides and CRD's for 460.1A and 460.2, CWG Report.

Self-Assessment/Evaluation Actions	RESPONSE			Comment
	Y	N	N/A	
A. GENERAL SECTION				
1. Do the following DOE Orders apply to your contract:				
a. DOE Order 460.1A, Packaging and Transportation Safety?				
b. DOE Order 460.2, Departmental Materials Transportation and Packaging Management?				
If you have answered "Yes" to either of the questions above, please answer all the appropriate questions in the following sections.				
2. Are you making the following hazardous materials shipments:				
a. Hazardous Material (classes 1-6, 8 & 9)?				
b. Radioactive Material (class 7)?				
c. Hazardous Waste (e.g., RCRA, TOSCA, state regulated, etc.)?				
d. Mixed Hazardous Waste?				
3. Are you shipping under any DOT exemptions?				
a. Have you applied to be a "party to the exemption"? [49 CFR 107.107]				
b. Can the user or shipper produce a copy of the exemption used? [49 CFR 173.22(a)]				

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	Y	N	N/A	
4. Are TDG Regulations and/or IMDG Code and/or ICAO technical instructions being used to prepare foreign or domestic shipments as allowed in 49 CFR 171.11, 171.12, 171.12(a)?				
5. Is the contractor registered as a hazmat shipper with RSPA? [49 CFR 107.601]				
6. Is the contractor registered as an EPA Waste Generator? [40 CFR 263.12]				
7. Are you shipping radioactive materials to non-government facilities?				
a. Are the facilities NRC licensees (if required)?				
b. Are you complying with NRC requirements, as applicable, when shipping to NRC licensees (non-government)?				
8. Do you verify hazardous materials are loaded and stored in accordance with segregation and separation requirements? [49 CFR 173.30 and 177.848]				
9. Do you ship environmental samples to offsite laboratories? If yes, please complete 9a and 9b.				
a. Is there a system in place to determine if the environmental samples are DOT regulated?				
b. Do you utilize the Materials-of-Trade exception in your environmental sampling process?				
10. Have the solidification agents or absorbents been tested with samples of the waste form for which they are to be used to verify that the agents and absorbents perform correctly? [CWG Report]				
11. If in question, do you verify that the hazardous material and/or waste stream/form complies with the DOT definition of a "solid"?				
12. Do you have RAM shipments that are excepted per 49 CFR 173.421, 173.424, 173.426 and 173.428?				

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	Y	N	N/A	
13. How do you verify proper Package identification requirements for an NRC, DOE-certified or DOT-COCA package of foreign origin?				
14. Are transport vehicles containing class 7 (radioactive) material shipments surveyed <u>prior to release</u> of an Exclusive Use Shipment to assure that radiation levels/contamination levels do not exceed the requirements of 49 CFR 173.443 and 173.843?				
B. SHIPPING PAPERS (Including Emergency Response Information Requirements)				
1. Does the basic description on all hazardous materials shipping papers conform with requirements of 49 CFR 172.202?				
a. Proper Shipping Name?				
b. Hazard Class?				
c. Identification Number?				
d. Packing Group?				
2. For class 7 material shipments, is the following information shown on shipping papers:				
a. The name of the radionuclide(s)? [49 CFR 173.433(f)]				
b. The physical and chemical form of the material, if not in special form?				
c. The activity (in Becquerels) of each shipping package?				
d. Category of label applied to each package?				
e. Transport index assigned to each package bearing a RADIOACTIVE YELLOW - II or RADIOACTIVE YELLOW - III label?				
f. Fissile or fissile-excepted if fissile?				
g. Any additional required information for fissile material?				
h. Exclusive Use Shipments (entered as applicable)?				

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	Y	N	N/A	
i. LSA I, II, and III or SCO I or II Groups? [49 CFR 173.203(d)]				
j. Package certification for NRC packages? [49 CFR 173.471]				
k. Package certification for DOE packages? [DOE 460.1]				
l. Additional description requirements for HRCQ shipments? [49 CFR 172.203(d)(4)]				
3. Does the site comply with the requirements found in 49 CFR Part 172.602 for "emergency response information?"				
a. Does the emergency response information contain the basic description and technical name of the hazardous material as required by 172.202 and 172.203(k), the ICAO Technical Instructions, the IMDG code, or the TDG Regulations, as appropriate?				
b. Does the emergency response information contain information about immediate hazards to health?				
c. Does the emergency response information contain risks of fire or explosion?				
d. Does the emergency response information contain immediate precautions to be taken in the event of an accident or incident?				
e. Does the emergency response information contain immediate methods for handling spills or leaks in the absence of fire?				
f. Does the emergency response information contain preliminary first aid measures?				
4. Does the site comply with the requirements regarding the "form" the information must come in?				
a. Is the emergency response information printed legibly in English?				
b. Is the emergency response information available for use away from the package containing the hazardous material?				

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	Y	N	N/A	
c. Is the emergency response information presented in the following manner? 1. Shipping paper? 2. In a document other than a shipping paper, which includes both the basic description and technical name of the hazardous material as required by 172.202 and 172.203(k), the ICAO Technical Instructions, the IMDG Code, or the TDG Regulations as appropriate, and the emergency response information required by this subpart (e.g. a material safety data sheet)? 3. Related to the information on a shipping paper, a written notification to pilot-in-command, or a dangerous cargo manifest, in a separate document (e.g. an emergency response guidance document), in a manner that cross-references the description of the hazardous material on the shipping paper with the emergency response information contained in the document?				
5. Do shipping papers for class 7 material shipments by passenger-carrying aircraft contain a printed certification that the material is intended for use in, or incident to, research or medical diagnosis or treatment? [172.204 (c)(4)]				
6. Does the total quantity of the material covered by one description appear before or after, or both before and after, the description required and authorized? [49 CFR 172.202(c)]				
7. Are technical and chemical group names entered in parentheses between the proper shipping names and hazard class or following the basic description? [49 CFR 172.202(d)]				
8. Are shipping papers issued for shipments made under a DOT exemption identified by the notation " DOT-E " and followed by the exemption number? [49 CFR 172.203(a)]				
9. Do shipping papers for limited quantity shipments of non-radioactive material include the words " Limited Quantity " or " Ltd. Qty. "? [49 CFR 172.203(b)]				

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10. Does each description of a hazardous substance identify the hazardous substance by name? [49 CFR 172.203(c)(1)]				
11. Are the letters "RQ" entered on the shipping papers either before or after the basic description of a hazardous substance? [49 CFR 172.203(2)]				
12. Are the words "Cargo Aircraft Only" shown on the shipping papers of the hazardous materials being shipped by air that are prohibited from carriage aboard a passenger-carrying aircraft? [49 CFR 172.203(f)]				
13. Do the shipping papers for shipments by water include: [49 CFR 172.203(l)]				
a. Types of packages?				
b. Number of each type of package?				
c. Gross mass of each type of package or individual gross mass of each package?				
d. Name of the shipper?				
14. Do shipping paper entries for hazardous materials identified in 172.203(k) show the technical name of the materials in parentheses in association with the basic description? [49 CFR 172.203(k)]				
15. POISONOUS MATERIALS				
a. For a division 6.1, packing group I or II, solid or liquid material, do the shipping paper entries (proper shipping name or hazard class) indicate "POISON" or "TOXIC" in association with the basic description? [49 CFR 172.203(m)(1)]				
b. Do shipping paper entries for hazardous materials identified in 172.203(m) show the poisonous constituent in parentheses in association with the basic description? [49 CFR 172.203(k)(1)]				

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c. For materials poisonous by inhalation, do the shipping paper entries include the words "POISONOUS-INHALATION HAZARD" and "ZONE A" , "ZONE B" , "ZONE C" or "ZONE D" ? [49 CFR 172.203(m)(3)]				
16. MARINE POLLUTANTS (49 CFR 171.4 and 171.8)				
a. Do shipping paper entries for marine pollutants identify the name of the marine pollutant material(s) in parentheses in association with the basic description? [49 CFR 172.203(l)(1)]				
b. For a marine pollutant material, do the shipping paper entries include the words "MARINE POLLUTANT" in association with the basic description? [49 CFR 172.203 (l)(2)]				
C. MARKING - NON-BULK PACKAGING				
1. Is each package marked with proper shipping name and unless limited quantity, appropriate hazardous material identification number? [49 CFR 172.301(a)]				
2. Is each package containing materials identified in 49 CFR 172.203(k) and (k)(2) marked with the technical name of the material(s) in parentheses in association with the marked proper shipping name? [49 CFR 172.301(b)]				
3. Is each package authorized by an exemption marked with "DOT-E" and the exemption number? [49 CFR 172.301(c)]				
4. Is each package that will be transferred from one motor carrier to another or not part of a truckload lot marked with the name and address of either the consignee or consignor? [49 CFR 172.301(d)]				
5. Is each combination package having nonhermetically sealed inner packagings containing liquid materials marked with two orientation markings indicating the upright direction? [49 CFR 172.312(a)]				
6. Is each package containing a material poisonous by inhalation marked "INHALATION HAZARD" in association with the proper shipping name? [49 CFR 172.313(a)]				

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7. Is each plastic outer packaging containing division 6.1 materials permanently marked " POISON "? [49 CFR 172.313(b)]				
8. Unless excepted, is each package to be transported by vessel containing a marine pollutant material marked to indicate, by name, the marine pollutant in parentheses in association with the marked proper shipping name? [49 CFR 172.322(a)(1)]				
9. Unless excepted, is each package containing a marine pollutant material marked with the " MARINE POLLUTANT " mark? [49 CFR 172.322 (a)(2)]				
10. Is each package containing a hazardous substance marked to indicate the name or waste code of the hazardous substance(s), in parentheses, in association with the proper shipping name? [49 CFR 172,324(a)]				
11. Is each package containing a hazardous substance marked with the letters " RQ " in association with the proper shipping name? [49 CFR 172.324(b)]				
12. When shipping a hazardous material in an overpack, is the overpack marked with a statement indicating that the inside (inner) packages comply with prescribed specifications when specification packagings are required, unless specification markings on the inside packages are visible? [49 CFR 173.25]				
D. MARKING - BULK PACKAGING				
1. Is each package marked with the appropriate hazardous material identification number? [49 CFR 172.302(a)]				
2. Is each package authorized by an exemption marked " DOT-E " and the exemption number? [49 CFR 172.302(c)]				
3. Is each package containing a material poisonous by inhalation marked on two opposing sides " INHALATION HAZARD "? [49 CFR 172.313(a)]				
4. Unless excepted, is each package containing a marine pollutant material marked with the " MARINE POLLUTANT " mark on two (or four) sides? [49 CFR 172.322(b)]				

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5. Is each portable tank marked on two opposing sides with the proper shipping name? [49 CFR 172.326(a)]				
6. Is each portable tank marked with the name of either the owner or lessee? [49 CFR 172.326(b)]				
7. Is each cargo tank transporting a class 2 material marked to indicate the proper shipping name or common name of the gas on four sides? [49 CFR 172.328(b)]				
8. Is each multi-unit tank car tank marked on two opposing sides with the proper shipping name or common name? [49 CFR 172.330(a)(2)(I)]				
E. MARKING - RADIOACTIVE				
1. Are class 7 material packagings that conform to the requirements of Type A or Type B packaging plainly and durably marked on the outside in letters at least ½ inch high with the words "Type A" or "Type B"? [49 CFR 172.310(a)(2)]				
2. Are class 7 (radioactive) Type B or fissile material packagings for export durably and legibly marked on the outside with the identification markings specified by the U.S. Competent Authority Certificate? [49 CFR 173.472(d)]				
3. Do packages containing class 7 material have the following markings:				
a. The gross weight if the package is in excess of 110 pounds? [49 CFR 172.310 (a)(1)]				
b. If destined for export, marked "USA" in conjunction with the specification markings? [49 CFR 172.310(a)(3)]				
c. The trefoil symbol on all Type B packages in a durable manner (i.e. embossed, etched, etc.)?				
F. LABELING				
1. Are packages being labeled properly with primary and subsidiary hazard labels? [49 CFR 172.400]				

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	Y	N	N/A	
2. If an outside container or overpack contains mixed and consolidated packages, is the outside container or overpack labeled with multiple labels for each hazard class contained therein? [49 CFR 172.404(a) and (b)]				
3. Are hazardous material packages restricted to carriage by cargo aircraft only properly labeled " CARGO AIRCRAFT ONLY "? [49 CFR 172.402(c)]				
4. When duplicate labeling is required, are the labels displayed on at least two sides of the package? [49 CFR 172.406(e)]				
G. LABELING - RADIOACTIVE				
1. Are labels affixed to packages containing class 7 material properly identifying the following:				
a. Contents per 49 CFR 173.433(f)?				
b. Activity in Becquerel?				
c. Transport Index (TI) if Yellow-II or Yellow-III?				
2. Are two labels affixed to opposite sides (excluding bottom) of each non-bulk package?				
3. Do all packages of Highway Route Controlled Quantity shipments have a " YELLOW-III " label affixed to the outside surface? [49 CFR 172.403(c)]				
4. Are "Empty" labels applied to radioactive packages when applicable for return shipments? [49 CFR 173.428]				
H. PLACARDING				
1. When making a hazardous material shipment by highway, does the shipper offer the appropriate placards for the material being shipped? [49 CFR 172.506(a)]				
2. Does the shipper affix the appropriate placard for rail shipments? [49 CFR 172.508(a)]				

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	Y	N	N/A	
3. For shipments containing a poisonous material subject to the Poison Inhalation Hazard or Poison Gas placards are they applied as a subsidiary hazard in addition to any other placard required for that material? [49 CFR 172.505]				
I. PLACARDING - RADIOACTIVE				
1. If a shipment involves a Highway Route Controlled Quantity of Class 7 material, is a "RADIOACTIVE" placard displayed on a white background as required in 49 CFR 172.527 affixed to the transport vehicle? [49 CFR 172.507(a)]				
2. Are "RADIOACTIVE" placards properly displayed for LSA and SCO material shipments shipped per 49 CFR 173.427(a)(6) and 172.504?				
3. Are transport vehicles carrying fissile or low specific activity uranium hexafluoride weighing 454 kg (1001 lbs.) or more placarded with "RADIOACTIVE" and "CORROSIVE" placards on each side and each end of the vehicles? [49 CFR 172.505(b)]				
J. EMERGENCY RESPONSE INFORMATION				
1. Does the facility where hazardous materials are loaded, stored, or otherwise handled, maintain and make immediately available comprehensive information? [49 CFR 172.600]				
2. Unless excepted, is the 24-hour emergency response telephone number provided on each shipping paper? [49 CFR 172.604]				
3. Is the emergency response telephone number monitored at all times while shipments are in transit and incidental storage? [49 CFR 172.604(a)(1)]				
K. EXPLOSIVES				
1. Have materials formerly designated as Class A, B, and C explosives been assigned a class under the new classification system?				

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	Y	N	N/A	
a. Does the contractor have "Classification of Explosives" or "Competent Authority Approval" documentation, identifying the proper shipping name, classification code, ID number, and EX-number associated with all explosives in inventory?				
i. If not, how does the contractor ensure that all explosives shipped have been reclassified under current regulatory requirements?				
b. Does the contractor have packaging configurations for the explosives it ships that represent the explosive packaging as tested for that classification?				
c. Have these packages been tested to meet UN performance-oriented-packaging standards?				
d. If original packagings are removed from storage, how does the contractor ensure that proper packaging is provided when shipped?				
e. If an article is removed from its packaging for storage, does the contractor have a system to reevaluate the classification code as stored?				
f. How does the contractor ensure that the proper packaging and classification code are used for shipping?				
2. Is the procedure for classifying new explosives in "EM Management Plan for Explosives" followed properly?				
a. Are the procedures identified in DOT-E 10536, Interim Hazard Classification, followed when using this exemption?				
b. Is the contractor a "party-to-exemptions" on all of these exemptions? (Provide a listing of all exemptions used by your facility, including revision number and expiration date).				
3. Does the contractor ensure that vehicles transporting Division 1.1, 1.2, and/or 1.3 explosives meet the requirements of 49 CFR 177.835?				

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	Y	N	N/A	
a. Does the contractor's facility have an inspection station for incoming explosives-laden motor vehicles located remotely from hazardous and populated areas?				
b. Does the contractor ensure that vehicles loaded with explosives and designated for movement over public highways are inspected and approved by a "qualified" inspector for compliance with an approved checklist?				
c. Does the contractor's facility have a temporary hold area for vehicles and railcars loaded with explosives?				
d. If yes to C., has this area been considered an above-ground magazine for quantity-distance purposes?				
e. Do packages procured offsite or constructed onsite for use as explosives packages meet the requirements of 49 CFR 173.60?				
f. Are the required tables identified in 49 CFR 177.848 readily available to drivers, material handlers, and management?				